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See 97 25X1
Att GSAhing,
Weapons Burial Containers

Dear Sir:

This letter report describes the activity on Task Order No. S during the period from June 18 to July 18, 1958.

On July 8, you visited us to discuss the work on this research program. At that time, you examined a completed experimental rectangular-cross-sectioned burial container, and recommended that we make the following modifications of the closure mechanism:

- (1) Change the shape of the levers and latch so that they would lie flat against the top of the lid.
- (2) Increase the height of the flange projection which prevents the levers from slipping out during the closure opening operation.
- (3) Replace the embossed projections on the lid with an angle or formed part.
- (4) Increase the width of the slots in the levers.
- (5) Bend the sides of the latch to a 30-degree angle so that they would be easier to grip.
- (6) Rework and radius the lever projections which hold the hinge, to prevent sticking of these parts.

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Activity Task Order
No. S. 6 reports
Jan-July '58

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August 21, 1958

In addition to the above examination, we also made a few "drop" tests with the container. For these tests, the empty container was positioned upright and then pushed over so that it fell onto a concrete floor with the lever hinge of the closure mechanism striking the concrete floor. The drop tests resulted in a slight bending of the lever hinge. A pressure leak test was then run on the container, and the unit leaked at a pressure of 3-1/2 psi. This showed that dropping had slightly damaged the O-ring sealing area since the container had not leaked at 3-1/2 psi prior to dropping.

As a result of these findings, you recommended that a rubber bumper be added to the container to protect the closure from damage if the unit were accidentally dropped in service.

Since the appropriation for the Task Order No. S program is not sufficient to cover all of the above recommended modifications, in accord with our discussion with you, we prepared and transmitted to you (on July 18) a proposal for a program that provides for making these modifications.

Work for the coming research period will consist of starting the modifications and designing a rubber bumper for the experimental containers.

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August 21, 1958

The original appropriation on this Task Order was \$12,709.
As of August 1, 1958, the unexpended balance was approximately \$550.

Sincerely,



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June 23, 1958

Joe 2F
Haver #3
Art aga

25X1

Caching,
Weapons Container

Dear Sir:

This letter report describes the activity on Task Order No. S during the period from May 18 to June 18, 1958.

As was described previously, leak tests on two experimental rectangular-cross-sectioned containers had shown leakage past the O-ring seal. One cause of this leakage was the warping of the flange during the welding operation, and another cause was the reduction in strength of the flange at the points where the flange lip had been notched to provide clearance for the lever hinges. In the course of correcting these difficulties, we purchased new flange formings and fabricated new container flanges without the notches. We then prepared a special welding jig to hold the flanges and prevent warping during the welding operation. Two flanges were then welded onto experimental-container bodies; and examination of the weldments showed no warping of the flanges. Subsequent leak tests (using the air-pressure test and a previously prepared test lid) also showed no leaking around the O-ring seal.

On June 10, we received the new formed parts for the 16-gage lid tops. These parts have been finished and are ready for assembly.

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June 23, 1958

On June 17, the 20- and 22-gage formed parts for the lid bottoms were received. As described in our previous monthly report, lid bottoms will be fabricated from both the 20- and 22-gage materials and evaluated to determine the most suitable material thickness for use in the container lid.

Work for the coming month will consist of the fabrication and evaluation of the container-lid parts, and the fabrication and leak testing of 10 experimental containers.

The original appropriation on this Task Order was \$12,709. As of June 1, 1958, the unexpended balance was approximately \$3,350.

Sincerely, *W*

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ABW:mjc

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Joe JP
25X1

May 26, 1958

Caching,
Weapons Container

Dear Sir:

This letter report describes the activity on Task Order No. S during the period from April 18 to May 18, 1958.

As was described in our previous monthly report dated April 25, 1958, two experimental rectangular-cross-sectioned containers were leak tested and both containers leaked through the O-ring seal at the corners of the lid. An examination of the points of leakage showed that the lid and flange dimensions did not provide enough O-ring squeeze to achieve proper sealing.

In order to correct these difficulties, we shrank the flange to the proper dimensions and fabricated a lid using one of the 20-gage lid bottoms that were made for the experimental container developed under Task Order No. D. These modifications stopped the leakage at the corners; however, we found that, when the container was pressurized internally with 3-psi air, leaks developed between the O-ring and the flange at the points where the flange lip was notched to provide clearance for the lever hinges. These notches were filled and subsequent tests showed that the container would withstand a 3-psi internal pressure without leaking.

On May 8, a trip was made with the Sponsor to Contour Forming, Incorporated, in Newark, Ohio. During our visit, we

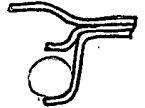
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May 26, 1958

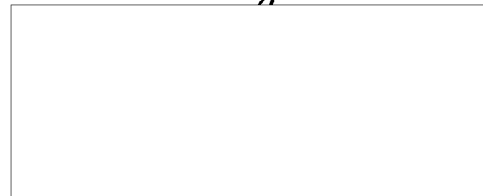
discussed the lid design for the rectangular-cross-sectioned container. After consideration of possible lid designs that would provide proper sealing, it was decided that we should make the container lids in three parts rather than in two, and that we should evaluate both 20- and 22-gage materials for the construction of the lid-bottom and -middle parts; 16-gage material would still be used for the lid top. An order was then placed with Contour Forming for lid-bottom and -middle parts made from both 20- and 22-gage material.



Upon receipt of the formed parts, lids will be fabricated and evaluated in order to determine the most suitable thickness of material. Delivery of these parts is expected on or around May 29.

The original appropriation on this Task Order was \$12,709. As of May 1, 1958, the unexpended balance was approximately \$4,200.

Sincerely, /



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In Duplicate

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Joe *JP**Caching,
Weapons Container* 25X1

April 25, 1958

Dear Sir:

This letter report describes the activity on Task Order No. S during the period from March 18 to April 18, 1958.

During this period, the formed parts for the rectangular-cross-sectioned containers were received from the commercial fabricator, and two of the experimental containers were fabricated.

On March 21, a trip was made to Contour Forming, Incorporated in Newark, Ohio, to check their progress on the formed parts. During our visit, 36 of the formed parts were completed and these were brought back for the finishing operations. The remaining 12 parts were received on April 1.

Two rectangular-cross-sectioned containers were completed and tested for leaks. In both containers leakage was noted at the corners of the O-ring seal. In the course of determining the cause of the leakage, the seal-face dimensions were checked. We found that, during the finishing and welding processes, the flanged parts had distorted; and also that the bottom section of the lid had a slight taper on the O-ring sealing surface that caused a decrease in the amount of O-ring squeeze.

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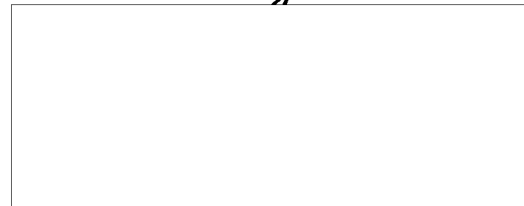
In order to correct these difficulties, we shrunk the flange to its proper dimensions and are considering the various methods of reworking the lid-bottom parts. It is possible that we might have to add an extra part to the lid to help hold the O-ring in its proper position.

} *
} No

It is anticipated that the work for the coming month will consist of rectifying the lid-sealing problem, and assembling and leak testing the 10 experimental containers.

The original appropriation on this Task Order was \$12,709. As of April 1, 1958, the unexpended balance was approximately \$6,900.

Sincerely, /



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In Duplicate

* Told [redacted] 25 April that we don't want these ten to be hand worked containers. These are our developmental production containers. There is plenty of money left in this program, and we will modify the forming of the lid components to accomplish a proper closure with hydroformed, not hand formed, parts.

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—H.B.

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43
Caching, 9A
Weapons Container
25X1

March 25, 1958

Dear Sir:

This letter report describes the activity on Task Order No. S during the period from February 18 to March 18, 1958.

The purchase order for the Hydroformed parts for the 10 experimental containers was placed with Contour Forming, Incorporated, in Newark, Ohio, on February 24. The quoted delivery for these parts was 30 days after receipt of the order. A telephone call to Contour Forming on March 12 revealed that they were on schedule and would deliver the parts to us by March 25.

The forming of the shells, handles, handle brackets, and closure parts for the 10 experimental units has been completed, and the welding of the shells has been started.

During the coming month, the welding of the shells will be completed and the finish work on the formed parts will be started. Also, the equipment to be used in leak and cycle testing the experimental units will be set up.

The original appropriation on this Task Order was \$12,709. As of March 1, 1958, the unexpended balance was approximately \$9,350.

Sincerely,

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ABW:mjc

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Caching,
Weapon's Container
25X1

#13
JF

February 17, 1958

Dear Sir:

This letter report describes the activity on Task Order No. S during the period from January 18 to February 18, 1958.

The detailed working drawings for the rectangular-cross-sectioned container have been finished, and fabrication of some of the small parts for the 10 experimental units has been started.

The press-brake die for forming the container shells has been completed. Fabrication of the 10 experimental shells will be started after the working drawings have been checked.

As soon as we receive your Contracting Officer's approval for the purchase of the formed parts for the 10 experimental containers, we shall place our order with the commercial fabricator.

Work for the coming month will consist of checking the working drawings, ordering the formed parts, and fabricating the shells, handles, handle brackets, and closure parts for the 10 experimental units.

The original appropriation on this Task Order was \$12,709. As of February 1, 1958, the unexpended balance was approximately \$10,450.

Sincerely,

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